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**In the Claims:**

Please cancel claims 27-45, 48 and 55 without prejudice or disclaimer of the subject matter therein, amend claims 26, 49 and 53-54 and enter new claims as follows:

26. (Twice Amended) A polynucleotide comprising a DNA sequence of at least 30 bases obtained by screening an appropriate library containing the complete gene for a polynucleotide encoding the polypeptide sequence set forth in [SEQ ID NO:1] SEQ ID NO:2 under stringent hybridization conditions with a probe having the sequence of said polynucleotide sequence set forth in SEQ ID NO:1 or a fragment thereof, wherein the stringent hybridization conditions include incubation at 42°C in a solution comprising: 50% formamide, 5x SSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 micrograms/ml denatured, sheared salmon sperm DNA, followed by washing in 0.1x SSC at about 65°C; and isolating said DNA sequence.

46. (Unchanged) An isolated polynucleotide comprising a polynucleotide encoding a polypeptide comprising amino acids 1 to 657 of SEQ ID NO:2.

47. (Unchanged) An isolated polynucleotide consisting of nucleotides 1 to 1974 set forth in SEQ ID NO:1.

49. (Amended) An isolated polynucleotide comprising a DNA sequence of at least 30 bases obtained by screening an appropriate library containing the complete gene encoding an amino acid sequence set forth in SEQ ID NO:2 under stringent hybridization conditions with a probe having a polynucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:2 or a fragment thereof, which fragment retains binding and/or catalytic activity, wherein the stringent hybridization conditions include incubation at 42°C in a solution comprising: 50% formamide, 5x SSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6),

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5x Denhardt's solution, 10% dextran sulfate, and 20 micrograms/ml denatured, sheared salmon sperm DNA, followed by washing in 0.1x SSC at about 65°; and isolating said DNA sequence.

50. (Unchanged) An isolated polynucleotide comprising nucleotides 1 to 1971 set forth in SEQ ID NO:1.

51. (Unchanged) An isolated polynucleotide comprising nucleotides 1 to 1974 set forth in SEQ ID NO:1.

52. (Unchanged) An isolated polynucleotide consisting of nucleotides 1 to 1971 set forth in SEQ ID NO:1.

53. (Amended) An isolated polynucleotide comprising a RNA sequence of at least 30 bases obtained by screening an appropriate library containing the complete gene encoding an amino acid sequence set forth in SEQ ID NO:2 under stringent hybridization conditions with a probe having a polynucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:2 or a fragment thereof, which fragment retains binding and/or catalytic activity, wherein the stringent hybridization conditions include incubation at 42°C in a solution comprising: 50% formamide, 5x SSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 micrograms/ml denatured, sheared salmon sperm DNA, followed by washing in 0.1x SSC at about 65°; and isolating said RNA sequence.

54. (Amended) An isolated polynucleotide comprising a DNA sequence of at least 30 bases obtained by screening an appropriate library containing the complete gene encoding an amino acid sequence set forth in SEQ ID NO:2 under stringent hybridization conditions with a probe having a polynucleotide sequence set forth in SEQ ID NO:1 or a fragment thereof, which fragment is a 17-mer or longer, wherein the stringent hybridization conditions include incubation at 42°C in a solution comprising: 50% formamide, 5x SSC (150mM NaCl, 15mM trisodium

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citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 micrograms/ml denatured, sheared salmon sperm DNA, followed by washing in 0.1x SSC at about 65°.

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56. A recombinant polynucleotide which encodes a polypeptide comprising a region having the amino acid sequence of SEQ ID NO:2, or the complement of the entire length of the encoding polynucleotide sequence.

-- 57. A vector comprising the polynucleotide of Claim 56.

-- 58. A host cell comprising the vector of Claim 57.

-- 59. A process for producing a methionyl tRNA synthetase polypeptide comprising the step of culturing a host of claim 58 under conditions sufficient for the production of said polypeptide.

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-- 60. An isolated polynucleotide segment, comprising a first polynucleotide sequence, wherein the first polynucleotide sequence is selected from the group consisting of:

(a) a first sequence having the polynucleotide sequence set forth in SEQ ID NO:1;

(b) a second sequence having nucleotides 1 to 1971 of the polynucleotide sequence set forth in SEQ ID NO:1;

(c) a third sequence having at least 30 sequential bases of the polynucleotide sequence set forth in SEQ ID NO:1;

(d) a fourth sequence having at least 50 sequential bases of the polynucleotide sequence set forth in SEQ ID NO:1;

(e) the full complement of the entire length of the polynucleotide sequence of (a), (b), (c) or (d).

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- 61. The isolated polynucleotide segment of claim 60, wherein the isolated polynucleotide segment is DNA or RNA.
- 62. A vector comprising the isolated polynucleotide segment of claim 60.
- 63. An isolated host cell comprising the vector of claim 62.
- 64. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 63 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.
- D<sup>4</sup> -- 65. The isolated polynucleotide segment of claim 60, wherein the first polynucleotide sequence consists of the second sequence.
- 66. The isolated polynucleotide segment of claim 65, wherein the isolated polynucleotide segment is DNA or RNA.
- 67. A vector comprising the isolated polynucleotide segment of claim 65.
- 68. An isolated host cell comprising the vector of claim 67.
- 69. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 68 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.
- 70. The isolated polynucleotide segment of claim 60, wherein the first polynucleotide sequence consists of the fourth sequence.

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- 71. The isolated polynucleotide segment of claim 70, wherein the isolated polynucleotide segment is DNA or RNA.
- 72. A vector comprising the isolated polynucleotide segment of claim 70.
- 73. An isolated host cell comprising the vector of claim 72.
- 74. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 73 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.
- 75. An isolated polynucleotide segment, comprising a first polynucleotide sequence, wherein the first polynucleotide sequence encodes a polypeptide sequence selected from the group consisting of:
- (a) a first sequence which is SEQ ID NO:2;
- (b) a second sequence comprising a portion of SEQ ID NO:2 containing at least 30 amino acids; and,
- (c) a third sequence comprising a portion of SEQ ID NO:2 containing at least 50 amino acids;
- wherein the polypeptide sequence is capable of generating antibodies having binding specificity for the amino acid sequence set forth in SEQ ID NO:2.
- 76. The isolated polynucleotide segment of claim 75, wherein the isolated polynucleotide segment is DNA or RNA.
- 77. A vector comprising the isolated polynucleotide segment of claim 75.
- 78. An isolated host cell comprising the vector of claim 77.

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-- 79. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 78 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.

-- 80. The isolated polynucleotide segment of claim 75, wherein the first polynucleotide sequence encodes the third sequence.

-- 81. A vector comprising the isolated polynucleotide segment of claim 80.

-- 82. An isolated host cell comprising the vector of claim 81.

-- 83. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 82 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.


-- 84. An isolated polynucleotide segment, comprising a first polynucleotide sequence, wherein the first polynucleotide sequence encodes a polypeptide sequence selected from the group consisting of:

- (a) a first sequence which is SEQ ID NO:2;
- (b) a second sequence which is identical to the first sequence except that the second sequence has one mutation relative to the first sequence, wherein the mutation is a substitution, deletion or insertion of one amino acid;
- (c) a third sequence which is identical to the first sequence except that the third sequence has 1-5 mutations relative to the first sequence, wherein each mutation is a substitution, deletion or insertion of one amino acid; and
- (f) a fourth sequence which is identical to the first sequence except that the fourth sequence has 5-10 mutations relative to the first sequence, wherein each mutation is a substitution, deletion or insertions of one amino acid;

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wherein the polypeptide sequence is capable of generating antibodies having binding specificity for the amino acid sequence set forth in SEQ ID NO:2.

- 85. A vector comprising the isolated polynucleotide segment of claim 84.
- 86. An isolated host cell comprising the vector of claim 85.
- 87. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 86 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence.
-  -- 88. The isolated polynucleotide segment of claim 84, wherein the first polynucleotide sequence encodes the second sequence.
- 89. A vector comprising the isolated polynucleotide segment of claim 88.
- 90. An isolated host cell comprising the vector of claim 89.
- 91. A process for producing a polypeptide of the first polynucleotide sequence comprising the step of culturing the host cell of claim 90 under conditions sufficient for the production of said polypeptide, which is encoded by the first polynucleotide sequence. --
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